

Product information

COLORTHERM® Yellow 20

Description

Type	Yellow pigment
Delivery form	Powder
Chemical class	Synthetic iron hydroxide α - FeOOH
Colour Index	Pigment yellow 42 (77492)
CAS-No.	51274-00-1
REACH registration no.	01-2119457554-33-0000

Specified Color Data

Colour values and tinting strength					
Standard	COLORTHERM Yellow 20				
Year	2007				
Binder:	Full shade		Reduction		Test method
Plasticised PVC			with titanium dioxide (1:5) ⁴⁵		
	min	max	min	max	Nr. 009 ⁴¹
ΔL^*	-0.5	0.5			
Δa^*	-0.8	0.8	-0.6	0.6	
Δb^*	-1.0	1.0	-1.0	1.0	
ΔE^*_{ab}		1.2		1.2	
Relative tinting strength [%]			95	105	

Specified Technical Data

Technical Data	min	max	
Water-soluble content [%]		0.5	similar to DIN EN ISO 787-3:2000
Sieve residue (0.045 mm sieve) [%]		0.003	DIN EN ISO 787-7:2009
pH value	4.0	8.0	DIN EN ISO 787-9:1995

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Informative Technical Data (guide values)

			Test method
α - FeOOH content [%] ⁵³	>	72.2	Information about the determination of iron oxide ⁴¹
Polymorphous Aluminium Phosphate content [%]	<	23.4	
Loss on ignition at 1000 °C, 0.5 h [%] ³	<	16	DIN 55913-2:1972
Particle shape		acicular	Electron micrographs
Predominant particle size [μ m]		0.1 x 0.7	Electron micrographs
Oil absorption [g/100 g]	~	45	DIN EN ISO 787-5:1995
Tamped density [g/ml]		0.5 - 0.9	similar to DIN EN ISO 787-11:1995
Heat stability [°C] (in plastics)	~	260	DIN EN 12877-2:1999
Density [g/ml]	~	4.0	DIN EN ISO 787-10:1995

³ Iron oxide yellow pigments contain a large amount of chemically bound water that is also recorded

⁴¹ Obtainable from LANXESS Deutschland GmbH, Business Unit Inorganic Pigments, mailto: ipg.product-information@lanxess.com

⁴⁵ Colour values after matching of the tinting strength parameter Y, i.e. $\Delta L^*=0$

⁵³ Minor elements may arise from the raw materials used. However, these are firmly bound to the crystal lattice as ions.

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Packaging

The product is available in sacks or bulk bags. For further information please ask your local contact or send an enquiry by e-mail to [mailto: ipg.product-information@lanxess.com](mailto:ipg.product-information@lanxess.com)

Transport and Storage

General storage conditions:	Protect against weathering. Store in a dry place and avoid extreme fluctuations in temperature.
Special conditions for opened packaging:	Close bags after use to prevent the absorption of moisture and contamination.
Shelf life:	<p>This product has an excellent shelf life. We recommend that this product is used within ten years of the date of manufacture and limit our product warranty to this period. During the first ten years after the date of manufacture we are able to ensure compliance with this specification, provided the material has been stored as stated above and the packaging materials remain undamaged. It must be taken into account that the packaging mean can have a shelf life considerably shorter than the one for this product. All recommendations and warnings given on the packaging must strictly be adhered to. Deviations from storage conditions can lead to undesired changes on side of the packaging materials. These succumb to ageing which may also lead to compromising their capability. Concerning their estimated service life we differentiate between the following packaging materials:</p> <p>All kinds of bags (Paper and PE) 5 years All kinds of Bulk bag 3 years</p> <p>With respect to our Bulk Bags we recommend to avoid UV-radiation because the sewing material of the lifting loops is stabilized against degradation by UV-radiation for appr. 1000 h incident sun radiation for the climate of Central Europe. A more intense sun radiation can shorten this period significantly. In cases of doubt the lifting loops must be checked thoroughly.</p>

Safety

Classification:	The product is not classified as dangerous under the relevant EC Directives and corresponding national regulations valid in the individual EU member states. It is not dangerous according to transport regulations.
Additional Information:	<p>In countries outside the EU, compliance with the respective national legislation concerning the classification, packaging, labelling and transport of dangerous substances must be ensured. The safety data sheet should be observed. This contains information on handling, product safety and ecology.</p> <p>The safety data sheet is available at www.bayferrox.de</p>

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Information concerning food contact regulations (not specified)

This product complies with the purity requirements of the following legal regulations respectively is listed on the mentioned positive lists.

General remark

As the food contact regulation of each country may differ, it is the responsibility of the manufacturer of the finished articles to ensure compliance with the respective country's regulation (migration resp. extraction limits, e.g.)

European Union (Council of Europe)	Resolution AP (89) 1 on the use of colourants in plastic materials coming into contact with food
Germany	Empfehlung IX "Farbstoffe zum Einfärben von Kunststoffen und anderen Polymeren für Bedarfsgegenstände" des Bundesinstituts für Risikobewertung (BfR) vom 01.01.2010
Belgium	Koninklijk besluit van 11 mei 1992 betreffende materialen en voorwerpen bestemd om met voedingsmiddelen in aanraking te komen
France	Circulaire n°176 consolidée du 2 décembre 1959 modifiée relative aux pigments et colorants des matières plastiques et emballages.
Netherlands	Warenwetregeling verpakkingen en gebruiksartikelen van 14 maart 2014
United Kingdom	Plastics for food contact applications, a code of practice for safety in use: BPF in connection with BIBRA, revised edition 1986. Like BfR Recommendation IX, this code does not have the force of law. However, processors view it as binding.
Italy	DECRETO 11 novembre 2013, n. 140 Regolamento recante aggiornamento al decreto del Ministro della sanità' 21 marzo 1973 recante: "Disciplina igienica degli imballaggi, recipienti, utensili destinati a venire a contatto con le sostanze alimentari o con sostanze d'uso personale" limitatamente agli acciai inossidabili.
Spain	Real Decreto 847/2011, de 17 de junio, por el que se establece la lista positiva de sustancias permitidas para la fabricación de materiales poliméricos destinados a entrar en contacto con los alimentos.
Japan	Complies with JHOSPA*-Positive list for Colorants in plastics and other purity requirements * (JHOSPA = Japan Hygienic Olefin and Styrene Plastics Association)
USA	According to an external opinion letter for use in all polymers at a maximum level of 2%, subject to this limitation and any other applicable FDA regulations.

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Status of registration (not specified)

The components of this product are listed on the following inventories:				
Europe: EINECS	USA: TSCA	Canada: DSL	Australia: AICS	New Zealand: NZIoC
Philippines: PICCS	Japan: METI	Korea: ESL	China: IECSC	Taiwan: NECSI